

NON-PUBLIC?: N
ACCESSION #: 8902280014
LICENSEE EVENT REPORT (LER)

FACILITY NAME: Beaver Valley Power Station Unit 1 PAGE: 1 OF 3

DOCKET NUMBER: 05000334

TITLE: Reactor Trip Due to Personnel Error
EVENT DATE: 01/17/89 LER #: 89-001-00 REPORT DATE: 02/16/89

OPERATING MODE: 1 POWER LEVEL: 090

THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR
SECTION
50.73(a)(2)(iv)

LICENSEE CONTACT FOR THIS LER:
NAME: T.P. Noonan, Plant Manager TELEPHONE: (412) 643-1258

COMPONENT FAILURE DESCRIPTION:
CAUSE: A SYSTEM: SJ COMPONENT: XXXX MANUFACTURER: XXXX
REPORTABLE TO NPRDS: N

SUPPLEMENTAL REPORT EXPECTED: NO

ABSTRACT:

On 1/17/89, post-maintenance testing of the "C" Bypass Feedwater Regulating Valve (BFRV) was in progress. The Reactor Operator reviewed the test procedure and located the step that stroked the "C" BFRV. The Reactor Operator requested the Plant Operator to perform this step and showed him the procedure, inadvertently pointing to the wrong step. The Plant Operator read the step indicated by the Reactor Operator, noted the breaker number in that step and went to open it. This resulted in the inadvertent de-energization of the "A" Main Feedwater Regulating Valve (MRFV). The "A" MRFV closed, isolating feedwater to the "A" Steam Generator, resulting in a Reactor Trip. The Auxiliary Feedwater pumps started and restored level to the "A" Steam Generator. The operators stabilized the plant using the Reactor Trip Response procedures. The involved operators have been counseled concerning this event. There were no safety implications due to this event. This event is bounded by Beaver Valley UFSAR Safety Analysis section 14.1.8, Loss of Normal Feedwater.

END OF ABSTRACT

TEXT PAGE 2 OF 3

Description

In 1/17/89 at 1800 Hours, the "C" Bypass Feedwater Regulating Valve (BFRV) was being returned to service after repairs on a body-to-bonnet leak. The valve was to be stroked for post-maintenance testing using the applicable sections of Operations Surveillance Test (OST) 1.1.10, the "Cold Shutdown Valve Exercise Test".

The Reactor Operator was directed to stroke test the "C" BFRV using the partial OST 1.1.10. He reviewed the procedure and initiated the test. At approximately 1830 Hours, he was ready to perform step 22.n. This was the step that actually stroked closed the "C" BFRV. As per procedure, the valve was to be stroked by opening Breaker 8-51 in DC Panel 2. Opening this breaker would de-energize the valve, causing it to close. The Reactor Operator requested the Plant Operator to perform this step. The Plant Operator was not immediately available, so the Reactor Operator set the procedure down next to the Control Room computer and continued with his normal duties. When the Plant Operator was available, the Reactor Operator picked up the procedure to show him what needed to be done. However, during the 5 minutes while the procedure had been sitting next to the Control Room Computer, a page had been inadvertently turned. The Reactor Operator skimmed the page, looking for the step to open the "C" BFRV breaker. However, instead of locating step 22.n. which opened breaker 8-51 on DC Panel #2, he found step 22.h. Step 22.h. opened breaker 8-48 on DC Panel #3, the power supply to the "A" Main Feedwater Regulating Valve (MFRV). The Reactor Operator pointed to step 22.h. and told the Plant Operator to perform it. The Plant Operator read the step that the Reactor Operator was indicating. He then proceeded to DC Panel #3 and opened breaker 8-48.

When breaker 8-48 was opened, "A" MFRV was de-energized. This caused the "A" MFRV to close, isolating Normal Feedwater to the "A" Steam Generator. The Reactor Operator observed the wrong valve had closed and initiated appropriate actions to restore Normal Feedwater. He transferred the valve to manual control and then instructed the Plant Operator to re-energize the breaker. The breaker was re-energized approximately 6 seconds after it had been initially opened. The "A" MFRV was then reopened. However, due to the resultant level and flow transient, the "A" Steam Generator level decreased to its Low setpoint before Feedwater Flow had returned to normal. This generated, as per design, a Reactor Trip/Turbine Trip signal due to Low Steam Generator level coincident with Steam Flow - Feedwater Flow mismatch.

TEXT PAGE 3 OF 3

The Reactor Trip/Turbine Trip occurred at 1835 Hours. The Turbine Trip

caused Main Steam pressure to increase, causing Steam Generator levels to further decrease. All three Steam Generator levels decreased below their Low-Low setpoint causing the Auxiliary Feedwater System to automatically actuate. As per design, the Steam Driven and both Motor Driven Auxiliary Feedwater pumps started and injected water into the Steam Generators. The Main Unit Generator tripped, as per design, 30 seconds after the Turbine Trip and Station power automatically transferred to its Off-Site supply.

Operators, using the Reactor Trip response procedure, stabilized the plant in Mode 3. Once Steam Generator levels were recovered, operators shutdown the Auxiliary Feedwater System and restored it to its normal system arrangement.

Cause of Event

This event was caused by Operator error. The Reactor Operator instructed the Plant Operator to perform an incorrect action. The Plant Operator failed to review the procedure or verify whether the actions he had been directed to perform were correct.

Corrective Actions

The involved operators have been counseled concerning this event. The station had recently initiated a Root Cause evaluation of Operator errors that had occurred within the last 6 months of 1988. Plant management directed that this event should also be included in the evaluation. Modifications to the Station's program regarding partial procedure performance are also being reviewed.

Safety Evaluation

There were no safety implications due to this event. The following ESF Functions/Components actuated at their respective design setpoints:

Reactor Trip
Turbine Trip
Auxiliary Feedwater - all pumps started and all valves
aligned to inject Auxiliary Feed to all Steam
Generators.
Generator Trip
Automatic Transfer to Offsite Power

This event is bounded by Beaver Valley Unit 1 UFSAR Safety Analysis Section 14.1.8, Loss of Normal Feedwater.

Telephone (412) 393-6000

Duquesne Light

Nuclear Group
P.O. Box 4
Shippingport, PA 15077-0004

ND3SPM:0405
February 16, 1989

Beaver Valley Power Station, Unit No. 1
Docket No. 50-334, License No. DPR-66
LER 89-001-00

United States Nuclear Regulatory Commission
Document Control Desk
Washington, DC 20555

Gentlemen:

In accordance with Appendix A, Beaver Valley Technical Specifications, the following Licensee Event Report is submitted:

LER 89-001-00, 10 CRF 50.73.a.2.iv, "Reactor Trip Due to Personnel Error".

Very truly yours,

T. P. Noonan
Plant Manager

vhy
Attachment

*** END OF DOCUMENT ***
